

Buchanan's Journal of Man.



VOLUME 5, NO. 8.—AUGUST 15, 1855.

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CINCINNATI:

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FLOURENS AND MEIGS.—If any apology is required for the space devoted to the review of these writers, it may be given in the language used by the highest critical authority, the British and Foreign Medico Chirurgical Review, in reference to Prof. Meigs—"We must now bring our notice of Dr. Meigs' 'observations, &c.,' to a close—a notice more extended than we should have given, were it not for the high position which our author holds in his own country, * * * notwithstanding that the details of his remarks are mixed up in these pages with a good deal that we can understand, but cannot approve, and with very much that we cannot approve of or understand either."

Compliment to an Author.

Prof. J. R. Buchanan, Editor of the Journal of Man, whose recent work on Anthropology is attracting the attention of the thinking world, was recently presented by his Philadelphia admirers with a gold-headed cane, formed from the wood of the Old Independence Hall, bearing complimentary inscription: "J. R. Buchanan, M. D.;" "Fama Sem-perviret;" "Independence Hall, July 4th, 1776;" "1855;" accompanied with the following letter:

PHILADELPHIA, July 4th, 1855.

DEAR SIR:—We, the undersigned, constituting a committee, of your Philadelphia friends, have procured a cane cut from the wood work of INDEPENDENCE HALL. This prized relic of the days of '76 we have now the pleasure to present to you as a token of the high estimation in which your character, AS A MAN is held by us and by our constituents.

"Palmar qui meruit ferat."

With best wishes for a long continuance of your career of usefulness.

We have the honor to be, sir,
Most respectfully,

Your sincere friends,
THOMAS F. CHASE, M. D.
FRANK STEWART, M. D.
P. E. SWEET, M. D.
D. MEAD, M. D. Committee.

J. R. BUCHANAN, M. D., Cincinnati, Ohio,
This testimonial, and the allusion to the

duration of his fame, are the spontaneous tribute from gentlemen who are personally strangers to Prof. Buchanan.—*Cin. Columbia.*

MURDER IN EUROPE.—The Liverpool Courier contains the following calculations, made by Mr. Spencer, who reviews the religious bearings of the facts given:

Dividing the population by the number of murders annually, there will be in England 4 murders to every million of inhabitants; Belgium, 18; Ireland, 19; Sardinia, 20; Bavaria, 30; France, 31; Austria, 36; Tuscany, 42; Lombardy, 45; Sicily, 60; Papal States, 100; Naples, 200.

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BUCHANAN'S JOURNAL OF MAN.

VOL. V.

AUGUST 15, 1855.

No. 8.

HUMAN TEMPERAMENTS.—THE WATERY BRAIN.

As the physical condition of the brain exerts a controlling influence over all our faculties and traits of character, it is highly desirable to understand the peculiar structure of the brain, in different temperaments and in various states of mental development and decline. I believe there is no essay upon this subject in the English language, although a number of scattered facts may be found in the records of medical science, which furnish interesting illustrations.

The most careless observer must have noticed the difference between men of firm constitutions in whom the muscles are solid, and the whole frame presents a tough and rugged appearance, in contrast with those of more delicate organization, whose relaxed muscles possess very little strength, and whose flesh is soft and delicate.

The contrast of appearance between delicate females of sedentary habits and the robust laborer is familiar to every eye. The same contrast is still more marked, between the tender flesh of an infant and the firmer and more rugged appearance of its father. Every one knows that in connection with the firmer muscles and tendons, the tougher and more rugged skin of the laborer, he will find physical strength, while the soft skin and tender muscles of the infant indicate weakness and incapacity to bear fatiguing labor. Firmness and compactness of structure are therefore familiarly known as the indications of physical power, while the soft and relaxed state of the solids is equally indicative of weakness.

We observe, moreover, that in connection with great physical power, the muscles and skin present deeper tints of color, while a pale, flabby, moist condition is indicative of debility. The muscular flesh of the ox

presents a rich deep red color in contrast with the paler flesh of the calf. The corresponding difference extends to the blood; that of the matured animal forming a firmer coagulum or clot, than that of the very young and immature.

These indications of opposite temperaments have their application also to the state of the brain. The brain of the adult, with his superior strength of mind and strength of character, is much firmer in structure than that of the infant; indeed the brain of a very young infant is so exceedingly soft, as to be very difficult of dissection; it is difficult to recognize its fibrous structure, which is very conspicuous in the brain of the adult. The adult brain also presents a deeper color, in its grey substance at the surface, where the active operations of the mind are performed.

To apply these suggestions to the elucidation of different temperaments, it may be inferred that the difference between strength and weakness of mind, will be accompanied by a corresponding difference in the firmness and color of the brain, and that mental developement by education is truly a process for strengthening and consolidating the brain as the physical developement of the gymnasium developes and consolidates the muscles. This very rational presumption is fully sustained by the facts; mental exercises judiciously conducted improve the condition of the cerebral substance, while all morbid conditions and injurious practices, which are destructive to the intellect, result in the softening of the brain. Prof. Albers of Germany states that in his dissections of the brain of several persons, who had "for many years undergone great mental labor" the substance of the brain was found to be unusually firm, the convolutions much developed and their gray substance increased. On the other hand, softening of the brain is very frequently found in cases of apoplexy and paralysis, or as a consequence of prolonged intemperance, and of diseases accompanied by emaciation, debility, and great depression of the mental powers. In cases of insanity, however, the substance of the brain may be either softened or indurated according to the character of the attack, the circulation of the brain being more active in cases where its substance is hardened, than where it has undergone softening.

The explanation of these phenomena may be found in certain physiological and pathological principles, which are well established by facts, though but little known or appreciated. The red arterial blood which nourishes and enlivens all parts of the body, produces when the circulation is active, great activity in the various organs; when the arteries and minute capillary vessels of the brain, are carrying a brisk current of red blood, the mental powers and passions are in their most exalted state of activity. When the circulation is less active the mental manifestations are less brilliant, and when the brain is occupied mainly by

the venous blood, owing to the small supply of arterial blood, its functions are still more sluggish and it tends to sink into a state of sleep or insensibility called coma. It may therefore be affirmed that in all persons of active mind and unusual strength of character, the brain is abundantly supplied with arterial blood, while in those of more inactive or lymphatic temperaments, the amount of arterial circulation of the brain is greatly reduced; hence persons of active minds and superior temperaments will have that condition of the brain which is produced by the circulation of red blood, while those of less mental activity will have that physical condition of the brain which is favored by an inactive circulation and predominance of venous blood. What these opposite conditions are may be clearly established by pathological facts. We find that, whenever the arterial circulation has been unusually vigorous, its substance acquires not only the healthful firmness, mentioned by Dr. Albers, but a still greater solidification, amounting to what is called induration. This was noticed by Foville in many cases of insanity of an acute character accompanied by high mental excitement. This condensation or firmness of texture under the influence of arterial blood, is believed to be owing to the influence of the larger quantity of fibrine contained in arterial blood, a substance which spontaneously coagulates and not only nourishes the tissues of the body, but in cases of inflammation may produce extra or morbid growths.

In the venous blood, the fibrine is of a softer character and lower grade of vitality, less fitted for nourishing the tissues, while the dark venous blood, instead of exerting the stimulating influence of the arterial, has a macerating, or softening influence, and operates efficiently in the way of dissolving and absorbing the wornout substance of the body, which the arterial blood is continually renovating with new material.

Hence, whenever the organs of the brain are unusually excited and active, having a greater amount of arterial blood in their vessels, they grow more rapidly and acquire a firmer structure, while other organs which are less active, having less arterial and more venous blood, have but little growth, and are gradually dissolved and absorbed by the venous system, thus making room for the growth of more active and cultivated organs. In this way, every organ of the human body is liable to be diminished or increased in its development, to an indefinite extent, by cultivation or neglect. While the stout arms of the blacksmith illustrate the increase of the muscles by exercise, it would be perfectly practicable to destroy entirely the muscularity of the arms reducing them almost to skin and bone, by depriving the muscles of all action. Such is the condition attained by the limbs of those who have been paralytic from infancy, the superfluous muscles which are never exercised, becoming so thoroughly absorbed, that nothing but a trace of their former existence would be detected by the anatomist.

The remarkable power that we possess of remodelling our own natures, by developing or reducing any of our organs, to produce a proper symmetry of character, teaches most impressively the power of education, and the control that one may exercise over his own destiny.

In contrasting the changes that occur in the brain, we find that under a beneficial mental discipline, the convolutions become more prominent and numerous, the gray substance at the surface of the brain more abundant, the fibrous structure of the brain more firm, its capillary vessels more numerous, and its circulation more active; while at the same time the growth of the nervous substance of the brain prevents its blood vessels from expanding too largely or filling the cranium with an excessive quantity of fluid.

On the other hand, under unfavorable influences, the arterial circulation and nutrition of the brain having declined, the sluggish and softening influence of the venous blood predominates; the substance of the brain becomes softer, its nervous matter is gradually absorbed and the place of the lost material is supplied either by a greater effusion of serum or an increase in the calibre of the blood vessels. When the size of the blood vessels is increased in consequence of the loss of cerebral substance, the circulation throughout the brain becomes more unstable or irregular, and the greater predominance of the fluids over the solids in the constitution of the brain renders its condition less stable and more liable to be deranged in its balance by every exciting influence. It is more easy in such a condition for the arterial expansion to produce undue excitement, or for venous congestion to produce an oppressed condition of the various organs. If no expansion of the blood vessels occurs when the cerebral substance is absorbed, the loss is naturally supplied by the effusion of serum in the ventricles or at the surface of the brain, and by an increased amount of water in the composition of the cerebral substance.

If a slice of the substance of the brain be subjected to chemical analysis, it will be found to consist of about three-fourths of water to one-fourth of animal matter, the gray pulpy substance of the surface of the brain containing a greater amount of fluid than the white substance of the interior. When the brain is imperfectly nourished, and the venous blood predominates, this watery condition is increased, and the firmness of the cerebral substance diminished. The brain of the infant presents evidently a greater predominance of the fluids over the solids than that of the adult.

We may therefore consider the watery condition of the brain a prominent cause of the mental weakness and general inferiority which we recognize in the uneducated and inferior classes of society, and in all whose mental imbecility prevents them from accomplishing much in life for their own enjoyment or the happiness of others. The feebleness of

character which is produced by a soft and watery condition of the brain, is recognized in many familiar expressions, which have been suggested by the common sense of mankind. The man whose dull and feeble brain pours forth nothing but twaddle, whose language contains but a weak dilution of thought, is pronounced a "sap-head," while the easy and credulous fool who is incapable of originating a vigorous idea, and is easily imposed upon by any absurdity, is considered "decidedly soft about the head." In this as in many other popular expressions there is a substantial basis of truth.

As the physical constitution of the brain is so important to our mental energy, it is necessary to understand the means for its improvement. First and foremost let us present the great law that exercise gives development. The natural healthful exercise of every organ is the only means by which it can be developed, without which it must inevitably decline and undergo absorption. But in addition to the legitimate, natural, healthful and agreeable exercise of our organs, it is necessary that the blood by which they are supplied should be sufficiently abundant and nourishing. Extreme emaciation, produced by low diet and exhausting diseases, is highly injurious to the brain. Great mental depression, and even in some cases insanity, are generally produced by the exhausted and bloodless condition arising from protracted abstinence, exhausting diseases, blood-letting, hemorrhage or any profuse evacuations by which the quantity of blood is greatly reduced and its quality impaired. A copious supply of good blood enables the brain to nourish itself properly, diminishes its irritability, and prevents those degenerations of its substance which are apt to occur in all impoverished constitutions. An active life and a liberal use of nourishing food will furnish the necessary conditions for the supply of good blood to the circulation of the brain, and an inactive life and imperfect digestion resulting in a meagre supply of blood, are very unfavorable to the cerebral health.

To those who are in this comparatively bloodless condition, a rigid system of low diet, which is sometimes advocated by dietetic reformers, is by no means beneficial. In the anæmic or bloodless state of the system, the nervous excitability and irritability are greatly increased, and the tone of the brain is necessarily impaired. The intellect may be clear and capable of receiving impressions with facility, but the cerebral energy which is necessary to brilliance of mind or to energy of character, is not enjoyed; the mental powers assume a passive character and are unfit to accomplish any great results.

The principles therefore to be borne in mind by all who would improve the condition of the brain, are to maintain that rich, abundant condition of the blood which accompanies high health, and to give to all the mental organs which we would cultivate, systematic, agreeable, vigorous exercise. This will insure the best condition of the brain and the highest development of our mental energies.

EVIL TENDENCIES IN HUMAN NATURE.

(BY ERNESTINE L. ROSE, NEW YORK.)

DR. BUCHANAN—DEAR SIR,

In your Journal of the 15th of June, I was particularly interested in the article on the "Moral Influences of the Intellectual Organs." But in pages 144 and 145 there are some things which I can not understand. I am one of those who cannot discover any "evil tendency in humanity." [This is because you have not in yourself enough of the evil tendencies which belong to the animal organs. If you had a larger development of those organs, which by-the-way you really need, you would have, not only a stronger constitution but a more thorough knowledge of their action. It is not easy for you to *realize* all the elements of human nature, because they are not all well developed in yourself.—Ed.]

I cannot realize, and it is painful for me to contemplate the possibility of an "inherent tendency to vice and crime as an essential portion of the human constitution." But I know we must not shrink from truth however conflicting with our feelings, for however unpleasant, truth is always beneficial, and error, however long cherished and agreeable to our feelings, is always pernicious, and knowing that your great object is to promote knowledge and truth, I take the liberty to suggest a few questions and make a few remarks, hoping thereby to elicit some more light on this most interesting and all important subject.

Are not the vices and crimes which degrade man, the immediate result of an inferior education and position through life? [Yes, but also of an inferior organization inherent from parents.—Ed.]

Might we not with as much justice attribute a natural tendency to physical deformity because the Chinese costume deforms the feet of their ladies, and our false civilized customs disfigure the waist of ours, or because a child through the neglect of its mother or nurse falls and cripples itself for life, as to ascribe the evident result of the present anti-social and consequently blindly selfish and vicious state of society to human nature? [Did not the present state of society originate from human nature itself? If you ascribe anything to governments, priests, armies, or education, are not the governors, priests, soldiers, generals and teachers all human beings, impelled by the natural passions of the human constitution? Our social constitutions, good or bad, are as much the product of human nature, as honey combs, ant hills and birds nests are the natural product of bees, ants and birds; and (unless we go back to primal causes—to creation) human nature is certainly the proximate cause of social institutions, crimes, vices and virtues—all of which naturally and inevitably arise from the existence of man in a material world, with a variable climate which compels him to labor and to suffer. It is

quite possible, however, to believe that in a world of Eden climate, with a healthful atmosphere, supplying all his wants by natural fruits, where neither labor nor suffering were imposed, and no beasts, savage reptiles, insects, storms or pestilence intruded, human nature might have been free from crime; but in the world as it is, no part of the habitable globe has been free from disease and crime. As for deformity, *individuals* may, it is true, be degraded by others (who are still *human* beings;) but there are a great many *feet* and faces too, which are decidedly ugly without having been in any way compressed or restricted in their natural growth. We must admit that *ugliness is natural as well as beauty*.—ED.]

Is not the law of progress in man a conclusive evidence of the ever onward and upward tendency in human nature, and the beauty and goodness of humanity? [Very true, and penitentiaries are also evidences of downward tendencies.—ED.]

Why then should we ascribe the follies, vices and crimes, the offspring of his ignorance of the laws of his being, and the relation he sustains to his fellow men, to human nature any more than the falling of a child before it has acquired sufficient firmness to stand erect or power to balance itself? [Precisely so—all babies fall—falling is natural to them—and all races are and have been ignorant and criminal until they have outgrown it—which no nation has done yet. It would be absurd to deny that crime and ignorance are natural, as to say that babies do not naturally fall or cry.—ED.] It seems to me that all the tendencies of human nature are for good only, from the simple fact the desire for happiness is inherent in every man, [but the desire to follow passion is in many much stronger,] and as a strict adherence to the physical, mental and moral laws only, can promote health, pleasure and enjoyment; in fine as virtue and goodness only can promote the aim and end of life, namely, happiness of the individual and society, both of the present and future generations, it must follow that virtue and goodness are in accordance with, and inherent in human nature, [that is, if everybody understood that strict virtue was the only road to happiness,] and vice and crime only acquired, and contrary to the nature of man, [Not at all—we are not impelled in most of our acts by a metaphysical desire of happiness, but by passions which carry us onward, even when we know that they lead to certain destruction. The drunkard clasps his bottle and the soldier his sword when neither can expect aught but a speedy and horrible death.]

It is true, his desires, though good in themselves, yet unguided by judgment grow into passions, his passions uncontrolled by his moral nature lead to vice, crime and misery; but is it not because his animal nature is cultivated, not in unison, but at the expense of his social and moral nature, that he is made blindly selfish, cruel, vicious and consequently miserable? [It is—but who cultivates or exercises the organs

of a nation of people but the people themselves?] Phrenologically speaking, the best organs (as they are called) may by a wrong direction lead to evil; conscientiousness and veneration misled have deluged the world with blood, while acquisitiveness, combativeness and destructiveness by a judicious developement in unison with the moral organs are most valuable instruments for good, not only to the individual but to society, and it seems to me that there can be as little tendency to evil in his organs as in his limbs. The tongue may be used to speak falsehood instead of truth, to curse instead of to bless; the hand to strike down instead of to raise up, to destroy instead of to save; yet we would not assign any evil tendency to these members of the human body. [No, for they have no tendencies—they are passive agents—but the organ of Destructiveness, for example, is not a passive agent like the arm—on the contrary, if sufficiently large it produces an amount of passion and fierceness which drive us into the commission of murder in spite of our judgment.]

Is not the will called out and directed by influences and motives in accordance with which it has to act? And are not even the worst acts of man only a misdirected idea of good? If so, where then is the evidence of the natural tendency to evil in humanity? [Here is your fundamental error—the assumption that man always acts in accordance with an honest desire for good, and consequently that if rightly instructed as to what is good for himself and others, he will always act right. This is doubtless the case with yourself, and it is certainly true that any one so happily organized as always to desire only what is good, is free from criminal tendencies, but such beings are not common—the great majority of mankind experience continual impulses to selfish, harsh, or vicious conduct—these impulses are a part of their natural constitutions, and cannot be removed by mere enlightenment; and although we may suppose a few to be exempt from such evil tendencies, they are still endowed with the same faculties and organs from which evil effects arise, and if their higher nature should degenerate or be overcome, the evil at once springs up and predominates. Never is man, in this life, free from the capacity for evil. His tendency to evil is not, it is true, the aggregate tendency of his character, but only a portion of its elementary tendencies,—sometimes over-ruling—sometimes over-ruled—but never entirely extinct. Even in leaving the body for spirit life, although he leaves his animal organs behind, he often carries some impress of their evil tendencies with him, which is removed only under the benignant influences of that higher benevolence which pervades the upper realms in which humanity is elevated and redeemed from the many depressing conditions of earth life.]

It is true that all the evil which becomes developed in man is developed in connexion with external evil influences, but so likewise is the

good developed in connexion with external good influences. If we separate man from external evil influences, it may be said that there is ultimately no evil in his nature—but in the like manner, if we separate him from the good influences, he has no good in him—in fact we cannot consider man apart from the influences *under* which he attains good or evil growth, and *without* which he grows not at all, or in other words he cannot exist.

Human nature, in this most abstract sense, has no character at all, for man has nothing in him but the creative force which determines his congenital character, and the impress of circumstances under which that character becomes developed. Take away both congenital and acquired character, and nothing is left. When therefore we say that human nature has no inherent tendency to evil, it may be true, if we also add that it has no natural tendency to good—in other words no tendency at all in itself.

But if we say that the tendency or character inherited from parents is the *natural tendency* of man, then there is no uniform tendency in human nature but a mixture of good and evil tendencies—some having a great preponderance of the good—others a great deal too much of the evil.

The idea that there are no evil tendencies in human nature, has no other just foundation than this—viz: that the plan of the human constitution in its most perfect symmetry, is truly good, and contains no essential evil, although liable to be changed in every conceivable manner, because it has not sufficient strength to resist all evil influences. Hence when it is exposed to a malarious atmosphere, and all the hardships of a rigorous climate, without the knowledge and resources necessary for its protection, the process of degeneracy commences—the capacities for disease, passion and crime become developed, and symmetry, health and innocence are lost. If the ideal perfect humanity could be endowed with an adamant energy to resist all change or decay in this world, or if it could be at once translated to Heaven and preserved in its freshness like fruits protected from the atmosphere, then might we speak indeed of a humanity free from evil. But as the world is now, humanity is full of evil, and those who are not conscious of this evil in themselves must go out of themselves to study it. The objection of optimists, and of all romantically philanthropic people, to admitting the existence of organs of evil tendencies is probably owing to their conceiving the organs as purely and essentially evil, in all cases, when in fact there are no such organs—the evil tendencies of humanity belonging to organs which in their proper development are only vital and passional energies, and which are evil only when in excess. But their excessive action and moderate action are essentially the same, as a burning fire is of the same caloric which produces a gentle warmth.

FLOURENS ON PHRENOLOGY.*

A GREAT GUN WITH POOR AMMUNITION.

In the second chapter, M. Flourens continues the same cavilling remarks, contending that Gall has destroyed the unity of the mind, because he has recognized a number of organs, each of which he says acts in the way of understanding, imagination, &c. He adheres pertinaciously to this representation, in spite of the fact that Gall distinctly recognized the soul or central spiritual power. Is it not a very petty business indeed, for a distinguished author in assailing the science of Phrenology to avoid entirely the consideration of its facts and the discussion of its real philosophy, and confine himself to metaphysical quibbles, insisting that Phrenology means what its founder never asserted. Yet thus continues Flourens: "He suppresses the *me* but insists there is a soul. He abolishes the *free will* and yet contends there is such a thing as morals." "He makes the idea of God an idea that is merely relative and conditional, but asserts that there may be such a thing as religion. I say he abolishes the *me*, for the *me* is the soul. The soul is the understanding general and one; but if there be no understanding as general, there can be no soul." This certainly is most superlative twaddle. M. Flourens may perhaps afford to utter such pettifoggish sophistry, but a young man who would write such a thesis would obtain credit only for fluency and impudence.

Gall abolishes our mental unity, according to M. Flourens, because he recognizes the subdivisions of the brain. He abolishes our free will also, because he recognizes the human mind as governed by the laws of its own constitution. And he abolishes the foundation of religion, because he asserts that religious emotions and conceptions are implanted in our constitution—belonging to the fundamental organs. "Indeed," continues Flourens, "he makes the idea of God nothing but a relative conditional idea, for he supposes that this idea comes from a particular organ, and he supposes that organ may possibly in some case be wanting." This, according to Flourens, is a double error, destroying the foundation of all religion—that is—to show that religion is an essential part of the human constitution absent only in cases of monstrosity, malformation or disease. Does M. Flourens imagine that the imperfect brain of a shark, a hog, or a horse is capable of forming ideas of God and religion. Can he suppose such an idea to exist in an infant born without brain (acephalous) or in an idiot of the lowest degree?

When such unphilosophical folly as this is gravely uttered by the perpetual Secretary of the French Institute, and introduced as a masterly

* Continued from page 183.

and splendid affair by a distinguished and prominent American Professor, one is tempted to inquire if the reign of absurdity is never to end, and if the day will not come when Academicians shall be invariably distinguished by reason and judgment instead of the childish display of stores of facts which they cannot comprehend.

That the reader may comprehend more fully the extent of our author's reasoning capacity, I will quote a little further—"It cannot be doubted, says Gall, that the human race are endowed with an organ by means of which it recognizes and admires the author of the universe." "God exists, adds he, for there is an organ" to know and adore him. Further: "There is no God for such beings whose organization does not bear the original stamp of determinate faculties." "What! If I happen not to possess a little peculiar organ (for it may be wanting) can I not feel that God exists! And how can I be an intelligence, knowing myself, and yet not knowing that God is? I do not more strongly feel that I am than that God is. "This idea" (the idea of God) says Descartes, "is born and produced along with me, first, as is the idea of myself."

How could M. Flourens reduce to writing such rigmarole as the above, in a city which has always contained so many intelligent Atheists as Paris—men of active, vigorous minds, to whom the idea of God was neither innate nor acquired, and who could not be induced to recognize its truth? How could he show such a solemn contempt for facts?

All this has very little bearing on Phrenology. But if our author does not know how to attack the vulnerable points of the science, he certainly has a very happy way of "pulverizing" himself while skirmishing in its neighborhood.

The remainder of the chapter prolongs a slip-slop commentary on the same subject, in which, after denouncing Gall for deviating from metaphysical philosophy in reference to the unitary *me*, he finally concludes that Gall's system does not necessarily differ from the common metaphysics, and says, "You return then to the common philosophy, and consequently no longer possess a peculiar philosophy." So, that this whole chapter of "much ado about nothing," shows nothing except that Gall's doctrines may be construed either to differ from the metaphysical philosophy, or to agree with it. The chapter concludes with the declaration that he has confuted Gall's psychology. It would have been better if he had merely written this declaration as his own opinion, and omitted the chapter.

Chapter third, on the Anatomy of the Phrenological Organs, is not so entirely empty and uninteresting as its predecessors. Anatomy is a subject upon which M. Flourens is competent to write. In this department he shows some sense of justice, and recognizes Gall's labors as an anatomist. He also makes some well grounded criticisms. His recog-

dition of the labors of Gall in cerebral anatomy, is worth quoting, as it comes from one who certainly had no favorable prejudice. "I return to Gall. Those who wish to learn Gall's doctrine, will always go up to Gall himself. 'M. Spurzheim, (says Gall) knows my discoveries better than any body else, but he tries to introduce among them a spirit quite foreign to that in which they were begun, continued and perfected.' Gall, moreover, was a great anatomist. His idea of tracing the fibres of the brain, is, as to the anatomy of that organ, the fundamental idea. The idea is not his own. Two French anatomists, Vioussens and Pourfour du Petit had admirably understood it long before his time, but at the period of his appearance it had been long forgotten. The brain was not then dissected by any one—it was cut in slices."

"It was a great merit in Gall to have recalled the true method of dissecting the brain, and there was still greater address on his part in connecting with his labors in positive anatomy, his doctrine of independent faculties and multiple brain." [p. 128.] "He found that the medullary substance of the brain was fibrous throughout; he saw the fibres of the medulla oblongata decussate before they form the pyramidal eminences, those of the corpora olivaria, &c.; that is to say, ascending fibres of the medulla oblongata across the pons varolii thalami nervorum opticorum, and the corpora striata, as far as the vault of the hemispheres: he saw the bundles formed by those fibres increase in magnitude at each of the passages; he distinguished the fibres which go out in order to expand in the hemispheres, from those that go in, in order to give birth to the commissures; many nerves that were regarded as coming out immediately from the brain, were by him traced even into the medulla oblongata."

"And I repeat that all these facts, with the discovery of which he has enriched the science of anatomy, all of these are the results of a happy thought of his—the idea of *tracing* the fibres of the brain, or to use a common expression, of substituting in the dissection of the brain the method of *developements* for that of *sections*."

"Those of Gall's opinions which it seems ought not to be adopted, are: that in which he supposes the nerve fibres to be born (he understands the word to the letter) of the grey matter; that in which he contends that the convolutions of the brain are merely foldings of the medullary fibres and can therefore be *unfolded*; that in which he compares the rete mucosum of the skin to the grey matter of the encephalon," &c., &c.

The criticisms of M. Flourens upon the Phrenological Anatomy of Gall, are, in some instances very just, though in others over strained and fanciful. Had he confined himself to this branch of the subject, and exerted himself to produce a thorough scientific criticism—his essay would have been quite respectable, and, indeed, quite valuable. But

when he discards entirely the Phrenological organs, because Gall does not accurately define their boundaries or demonstrate their distinct anatomical constitution, his objections can only be regarded as puerile cavilling. Every one now recognizes the existence of sensitive and motor filaments in the spinal cord, although no anatomist is able to show their anatomical distinction, to indicate their boundaries, or to show the separation between them. Why should nature depart from its usual course in the formation of the brain, and place unnecessary separations between the organs, for the accommodation of M. Flourens, when we know that it is absolutely necessary for all portions of the brain to maintain intimate communication with each other, to establish the proper sympathy and connection between the numerous organs, and between them and the mind.

This objection, which has been the leading argument of anti-Phrenological anatomists, is, therefore, entirely worthless, for if it proves anything, it proves too much.

M. Flourens next objects greatly to the doctrine of Gall that the organs of the mind are located chiefly at the surface of the brain, against which he advances the assertion that a slice from any surface of an animal's brain will not deprive it of any of the faculties. Upon that subject I have answered already. If his facts are correctly reported, they prove very little. But on the other hand, physiologists and pathologists generally agree that the mental operations are chiefly performed at the surface of the brain in contact with its membranes. These two objections then amount to nothing. Yet, after all this idle fanfaronade he adduces in the third chapter an objection which is really substantial and forcible, as it is directed against a great and prominent error of the Gallian system, "Gall places the love of offspring in the posterior lobes of the brain; now the love of offspring, and especially maternal love, is every where to be found among the superior animals; it is found among all the mammifera, in all the birds. The posterior lobes of the brain, therefore, ought to be found in all those beings. Not at all: the posterior lobes are wanting in most of the mammifera; they are wanting in all birds. Gall locates the faculties that are common to both man and animals in the posterior part of the brain; in the anterior part he places those that are peculiar to man alone. According to this plan, the most *persistent* portion of the brain will be the posterior portion, and the least persistent the anterior portion. But the inverse of the proposition holds. The parts that are most frequently wanting are the *posterior parts*, and those that are most invariably present are the *anterior parts*."

These statements indicate correctly an important error in the Gallian system, which I have heretofore pointed out, in which the doctrine of Gall needs rectification as regards the most posterior occipital organs.

This rectification I have made, and therefore have nothing farther to say upon the subject, but to refer to my Anthropology and the article upon Embryology, in the third volume of the Journal of Man, in which the subject has been well developed.

Thus in the first 90 pages of M. Flourens we find but one objection worthy of notice for its substantial value. The rest of the chapter consists of a few gossiping remarks, about the difficulties of cranioscopy, in which he merely repeats the statements of Gall, and concludes by expressing his regrets that the people must have one idol after another, and that his own idol, *Descartes*, to whose memory the book is dedicated, should be superseded by *Gall*. "*Descartes goes off to die in Sweden and Gall comes to reign in France.*" Doubtless he reigns among philosophic minds, but there are always many lawless individuals like M. Flourens who are not governed by the power of reason.

The fourth chapter is devoted to Spurzheim; he quotes the criticisms of Spurzheim upon Gall's doctrine of the external senses, and decides very correctly that Spurzheim is right.

"*Offices of the external senses.* M. Gall is disposed, says Spurzheim, to attribute to the external senses as well as to each and every internal faculty, not only perception, but also memory, reminiscence and judgment. It seems to me that such facts (the facts cited by Gall) do not prove the conclusion. 'In the first place, memory being nothing more than the perception of knowledge must have its seat in the point where perception takes place. The impressions of the nerves that give rise to the sensation of hunger, &c., are indisputably perceived in the head which likewise has the reminiscence of hunger. I do not believe we can conclude the eyes or the ears are seats of reminiscence.'"

It is very remarkable that when he perceived the fallacy of Gall's ideas upon this subject he did not also perceive the absolute necessity of giving the various senses their proper cerebral organs. M. Flourens might well have pointed out the inconsistency of the doctrine, in not locating the external senses in the brain, as well as the other faculties of the understanding, but his mind seems to be devoted mainly to frivolous criticisms and matters of verbiage. However, in his remarks upon the Phrenological nomenclature he presents a remarkable and philosophical observation—so very sensible, indeed, one is tempted to suspect that he does not fully understand it, or realize its force. He says:

"Gall and Spurzheim talk a great deal about nomenclature, but they do not perceive that as to nomenclature the first difficulty, and indeed the only one, is to get at simple facts. Whoever has come to simple facts, has come very near to a good nomenclature."

Bravo! M. Flourens! if Gall and Spurzheim do talk nonsense, you will even talk sensibly for once to refute them; but most curiously it happens that Gall and Spurzheim themselves do act upon this philosophic

principle, while M. Flourens has entirely neglected it, and throughout the whole book never once refers to the facts of Phrenological science upon which its nomenclature is based. Thus the only shrewd philosophic principle in the book is actually stolen from Gall and Spurzheim, not to use for any good purpose, but merely to rob the rightful owner of its possession. With a few pages of gossip about the differences of Gall and Spurzheim, the chapter terminates.

Chapter 5 is devoted to gossip about Broussais and his mental tendencies, ending with the suggestion that we should all forget his lectures upon Phrenology.

Chapter 6, on Broussais' Phrenology, is another Lilliputian chapter of 32 lines of gossip, ending very appropriately with the sentence—"Philosophers will talk"—to which we may add, some who are not philosophers also. Chapter 7, on Broussais' Philosophy, contains 30 lines more, as jejune as possible. Chapter 8 recognizes the merit of Gall as an Anatomist, and says that credulous curiosity is the cause of the success of the Phrenological system. The few pages of notes which conclude the book require no farther notice, as all they contain of value has been already quoted in reference to Gall's anatomical doctrines.

And such after all is the "masterly criticism," the "pulverizing blow" of Prof. Flourens, an author, whom Dr. Meigs pronounces "one of the best and most precise thinkers in Europe," who, by his writings and lectures and "by his position in the Institute, has acquired a place among the literary and scientific celebrities of the present age." "The amiable and elegant manners, and fine disposition of this distinguished character, coincide with his acknowledged learning, exactness and zeal, to accumulate upon him the public respect and esteem. It is therefore with the greatest confidence that I present to you this copy of his criticism upon Phrenology, since I suppose that every writing of so good a man might prove acceptable to you, and to the studious portion of our countrymen generally.

"So highly have I appreciated it, that I cannot readily suppose it possible to rise from its perusal without being convinced that Gall was wholly mistaken in his views of the human mind; and of course that all the cranioscopists, mesmerisers, and diviners who have followed his track or risen upon the basis of his opinions are equally in error."

Such is the eulogium of Professor Meigs, who has certainly never officiated in the delivery of a greater monstrosity or anything more nearly acephalous than this little French bantling, which is thus introduced to the American public, filled out and extended by typographical art into the dimensions of a respectable book—an unfortunate speculation doubtless for the luckless booksellers, for even the reputation of a Royal Academy cannot prolong the vitality of such productions, and it would be improper to arrest them in their passage to oblivion but for

the fact that among the unthinking, the confident announcement upon the other authority of Dr. Meigs that Phrenology had been refuted by Professor Flourens, might have some weight in discouraging the study of the science. The value of the criticism of Flourens and the endorsement of Meigs may be judged from the fact that with the exception of one objection referring to an error of the Gallian system, the whole book is singularly frivolous and inconsequential, spiritless and vapid. Nor does it once attack the fundamental principles of Phrenological science, and the great array of facts upon which they are based, but by the mere assertion that his own experiments in vivisection have refuted the doctrine of Gall—an assertion of which he gives no proof, and which is quite contrary to the fact that Physiologists generally consider such vivisections almost worthless.

Did this criticism really assail the distinct and fundamental doctrines and facts of the science, it would be entitled to more consideration, but occupied as it is with anatomical cavilling and unimportant gossip, it compares very unfavorably with many other attacks upon Phrenology, none of which are characterized by such indications of senile imbecility.

Doubtless there were some such productions as this from the Academicians of his day which induced the celebrated wit Piron to suggest for his own epitaph the curious sarcasm—

“ Here lies Piron
He was nothing
Not even an Academician.”

If any good natured and dispassionate reader should suppose that in these criticisms I have adopted too great a severity of style, they will bear in mind that I have merely uttered the plain truth in a plain and emphatic manner, and when the gigantic charlatanry of such as Flourens and Meigs aspires to assail some of the master minds of the present century, whose grand thoughts they neither appreciate nor understand, when in addition to this, they bring to bear all the power of official position to excite aversion and contempt against the cultivators of this science, which constitutes one of the great redeeming agencies of humanity, it is but just that their scientific blunders and frivolous sophistry should be held up nakedly in all their paltry meagreness before the gaze of an intelligent public.

RECENT HUMAN PROGRESS.

THE REMOVAL OF MERCURY FROM THE HUMAN BODY BY ELECTRICITY, which has recently been brought into notice in France, has been verified in our own country, as will be seen by the following article from the *Columbus Journal*:

“ Having heard a rumor on the street that mercury had been extracted from the body of a sick man in the form of quicksilver, and being anxious to witness such an experiment, we accompanied Drs. Youmans and Seltzer, the operators, yesterday, for the purpose of judging for ourselves of the truth of the statement. We found Mr. Jacob Hymrod, the patient, living in the south part of the city, who has been afflicted with the chronic rheumatism for the last ten years, lying upon the bed in an enfeebled state, who told us that he had heretofore tried every kind of medical treatment without success. He had swallowed, during his sickness, vast quantities of mercury in the shape of calomel and blue pills, from the effects of which he had nearly lost the use of his limbs. He showed a globule of quicksilver larger than a good sized pea, which he said had been gathered from the bottom of the electric bath in which he had been placed. He had been seated upon a metallic stool in an insulated zinc bath, well coated with paint, and his feet immersed in acidulated water. The galvanic battery was then applied, the positive pole held in the hands of the patient, the negative pole being in the bath. It is claimed that the power of electricity upon the system is such as to eradicate every metallic substance, and by means of the wire it is deposited in the bottom of the tub. It requires some twenty-four hours for the globules to collect themselves so as to be perceptible to the naked eye, when they may be seen by thousands clinging to the sides and bottom of the bath. We were informed by the doctors that three drachms of quicksilver had already been taken from the patient, who, together with his friends and relatives present, confirmed the statement. Although this pumping of quicksilver out of the body of a man by the means of a galvanic battery may seem strange and smell a little of humbug, we trust our scientific and medical men will not pass the experiment without a thorough investigation.—*Columbus Journal*.

The announcement of this discovery in France and its successful application in this country, revived in my mind that feeling of sober sadness with which the history of human progress is associated. The germs of great discoveries and improvements are ever lying undeveloped in human minds, like the multitudes of seed in the bosom of the earth, waiting for exposure to the sun-shine of genial seasons before they can spring up into life. We crush continually, by neglect, contempt and opposition the original minds that might advance the world's condition, and if one succeeds in producing a valuable result, it is not merely

because of the truth in him, but because of his force to make that truth felt. This very discovery of the extraction of mercury from the human body was communicated to me four or five years ago by Prof. J. Milton Sanders, then professor of Chemistry in the Eclectic Medical Institute, who described the appearance of quicksilver in the palm of the hand when extracted by his method through the arm. Prof. S. was not in Paris, and had not the proper situation, perhaps not the ambition to attract the world's attention at once to this improvement.

So it goes with a stolid world. It continually discourages the progress of knowledge by indifference and neglect. Horace Wells gave up in despair his attempt to introduce etherization in Boston. Jackson and Morton, however, made it a nostrum, and were more fortunate in attracting the world's attention to it as their own discovery, after the true originator had been defeated by the indifference of the profession.

New truths to be imported from the vast realms of unexplored wisdom must still pay the heavy tariff that conservatism exacts, and although they are not absolutely prohibited as in former times by a death penalty, they are repelled by heavy burdens on their introducers, and by a cold indifference, which causes the most glorious truths to hold aloof from the abodes of men, as if scorning their uncongenial society.

ALUMINUM—THE NEW FRENCH METAL—will soon be a familiar improvement.

“An extraordinary metal is said to have been discovered by Sainte Clair Deville, Professor of Chemistry at the Superior Normal School, Paris, in conjunction with Mr. Wohler, Professor of Chemistry, at the University of Gottingen. In a report made to the French Emperor by the Minister of Public Instruction, the metal is thus described:

“When this extraordinary metal—light as glass, white and shining as silver, almost as unchangeable as gold, malleable and ductile in the same degree as these precious metals, strong as iron, and which is capable of being worked into any form by casting, by the hammer, and by the file—when this metal, which is found in abundance in the commonest clay, shall have taken its place in the domestic economy and the arts, no astonishment will be felt at the encouragement which your Majesty has given in order to render its extraction easy and less costly.”

“The public have been interested latterly by statements respecting a new method of obtaining in large quantities, from that most abundant of deposits, common clay, a metal which rivals in beauty with silver, and surpasses it in durability, not to mention other qualities. The discoverer—for so we must call him—is M. Sainte-Claire Deville. Aluminum, which hitherto existed only in very small quantities, and esteemed rather as a curiosity, can now be produced in masses sufficient and cheap enough to replace copper, and even iron in many respects, and

thus place the "new silver," superior in some points to the real article, into such common use as to suit the means of the poorest persons.

"We learn from Paris that the members of the Academy of Sciences and the numerous auditory were loud in their admiration and surprise at the beauty and brilliancy of many ingots of aluminum presented by M. Dumas, the celebrated Chemist. It was impossible to believe they were not silver until taken into the hand, when their extraordinary lightness at once proved the contrary. That a metal should weigh so little seemed almost incredible.

"The price of aluminum a short time since in France was about the rate of gold! M. Dumas assured the Academy that, owing to recent discoveries, reducing the expenses of extracting it, the cost of production was now about one hundred times less; and Mr. Balard, another member, stated that there was little doubt that the effect of competition in its manufacture, together with the advantage of throwing it open to the industrial resources of the world, would be to reduce the price as low as five francs the kilogramme, or about forty cents a pound.

"This important result is mainly attributable to the facility with which we are now able to procure pure sodium in abundance, which is the active agent for the revivification of aluminum, and which was at one time very expensive. Sodium is obtained by the decomposition of carbonate of soda by charcoal. By the aid of a little lime it has been found easier to separate it from oxygen. The conversion of aluminous earth or clay into chloride of aluminum takes place so easily that the price of the chloride only comes to about ten cents a pound.

"M. Dumas observed that the generalization of the procedure of M. Deville, the application of chloride to the extraction of metals, forms a new era in metallurgy.

"Among the many remarkable qualities of aluminum, such as its resistance to oxydation, either in the air or by acids, its hardness, its wonderful lightness, its malleableness, the facility of moulding it, &c., M. Dumas mentions another, its sonority. An ingot was suspended by a string, and being lightly struck emitted the finest tones, such as are obtained only by a combination of the best metals.—*Nat. Intelligencer*.

LEATHER CEMENT.—Vegetarians will doubtless rejoice in the discovery which proposes to supersede leather, but unless the new substance can be made porous it will be no better than gum-elastic which at present make the cheapest possible shoes, but is little worn because it confines the perspiration.

"A DISCOVERY.—To have to kill an ox in order to make a pair of boots is a clumsy thing; and we have waited some time to hear of some invention which will supersede leather for the feet, as wool, cotton linen and silk have superceded the skin of animals for the rest of the

human dress. We see the London papers speak of an invention, which has just been submitted to the test by the scientific authorities. A leather cement, so strong and adhesive that boots and shoes are made with it, in which not a single stitch is seen or required, and the process of mending so simple that every man may be, if not his own boot-maker, at all events his own boot-mender."

"CALCULATING MACHINE.—A remarkable machine, for the purpose of abstruse calculations, has been deposited, for the present, at the Royal Society in London. It is the invention of a Swedish gentleman, named Schutz, who has, it is said, expended the greater portion of his property in the operations necessary to bring his invention to a successful issue. This machine, which may be seen in full operation, will compute all the logarithms in Hutton's Tables, by the simple turning of a handle and without the possibility of error; it not only does this, but it prints them and stereotypes them. The arrangements of the various portions of the engine are admirably planned, and the mechanical contrivances models of beauty and simplicity."

THE POWER OF STEAM, it is supposed by one of its zealous advocates, will revolutionize agriculture as well as the mechanic arts.

"Mechi, the Napoleon of agriculture, informs the public (through the London Times) of a new digging machine. He writes: "A calm and rigid investigation and computation have convinced me that the doom of the plow, as an instrument of culture is sealed, and that the rotary forking, or as it is wrongly called digging machine, is the only profitable cultivator. Even with six or eight horses, it is cheaper and infinitely more effective than the plow. Since the trial of implements at my 'gathering,' I have received from one of our North American colonies, the model of a newly invented machine, which, by a happy and most simple combination of horse and steam power, will—and I pledge my agricultural reputation for it—not only deeply, cheaply and effectually cultivate and pulverize the soil, but at the same time sow the seed and leave all in a finished condition. It will also, by a simple invention, cut and gather corn, without any rake or other complications, while both in cultivation and harvesting its operation will be continuous and without stoppage."

WAR has its progress as well as peace. The Baltimore Republican describes a revolving battery invented by Shaw & Ames, of Baltimore, which they can fire *eighty times in a minute*. A larger battery carrying four pound balls they say can be fired "*fifty times a minute without cessation*. The entire operation can be performed by one man, and so complete is its arrangement and construction, that it is almost beyond the possibility of an accident from a premature discharge."

Wm. J. Kellogg, (engineer,) informs the N. Y. Tribune, that "Homer Anderson, formerly professor of Natural Sciences and Mathematics in the Clinton Liberal Institute, has invented an entirely new incendiary shell, which is here considered to be one of the great discoveries of the age. Some fifty citizens of this place witnessed the experiments made with complete success and wonderful execution. I will merely attempt to give you a synopsis of his positions and the experiments made :

First—He will wrap in flames any fortification that the American people can erect either of stone or wood.

Second—Any shipping.

Third—Any city in fifteen minutes.

I must say, judging from the experiments made, these positions will be sustained in field and marine service. A six pounder was charged with powder and shell, and was fired at some rocks at a suitable distance. Electricity could not be more sudden than was the ignition upon rocks ; corruscations of light arose some fifteen feet in the air, emanating from materials under the most intense ignition. It rained very hard, but notwithstanding the rain it burned on the rocks twenty-five minutes and in various places on the grass, which was exceedingly wet. Cheers upon cheers burst forth from the gazers when they saw the flames bursting forth from the bare rocks, covering an area of twenty square feet before the sound of the cannon reached the ears, and too with a miniature ball whose weight when charged did not exceed nine pounds.

Professor Anderson has accomplished what many have attempted and failed. Sudden ignition of gunnery and that from a cannon, with perfect safety. He is warmly opposed to war, but considers the more destructive the agents used the more will they tend to lessen the chances of that great evil."

It is a sad fact shown by the reports to Congress that our military and naval expenditures during the last sixty years have "*increased nearly four as times fast as our population!*" Under Washington's administration the army and navy cost but a little more than one million and a quarter a year, in contrast with twenty-two and a half millions last year, *an increase of eighteen per cent* ; while this year Congress is solicited to appropriate more than thirty millions for war purposes. We doubt whether any government ever made equally gigantic strides in its expenditures for such a purpose in a time of peace. England, herself, with her nearly four hundred millions of war debt now, began her career of war prodigality at a snail's pace in comparison with ourselves."

FUTURE OF TURKEY.

The Anglo-Saxon must be laid low on many a bloody field, and England's heart of oak be buried deep in the green wave, before either Greek or Latin shall wave their banner over St. Sophia. But, there is a mightier and far more interesting question behind all this. Why should not Turkey be Protestantized? What is to prevent? Mr. Boynton has *ignored* the most important facts connected with the religious history of Turkey, in the last ten years. He ignores the *beginning and rapid progress of American Protestantism* in Turkey. There is already in Turkey an *American influence*, and small as it is, it is not likely Americans will forget it.

Mr. Layard declared in Parliament, that already Protestant communities were scattered throughout the whole of Turkey, and these were formed by American Missionaries. Not four months since was exhibited in the center of Turkey, (Aaintol) one of the most extraordinary moral spectacles of the age. It was the dedication of the Protestant church at Aaintol, whose congregation now numbers 1,100 persons! Connected with this, are nearly forty churches, (most of them small indeed) founded and taught by Americans, in the Protestantism of America. Let the reader recollect that not one of these existed ten years since; and then let him calculate how long it will take to cover Turkey with hundreds and thousands of churches who will acknowledge neither the Greek nor Latin church?

Let us now mention, in order, some *facts* which have not been sufficiently known to the public. In the *first* place, it is the Armenian mind which is passing through this new reformation. And who are the Armenians? They are a part of the ancient, original population of the country—and, by far the most enlightened, active and commercial part. In affecting and converting the Armenian mind, therefore, the Protestant missionaries are doing far more than they would do by affecting to the same extent the Greeks or Mohammedans; for they are converting those who can be their most active and powerful agents.

Secondly—The Mohammedans now *bow* with respect, and several have actually been converted, and this never happened *till within the last five years*.

Lastly—The Mohammedan mind is paralyzed and the Greek inert. There is no indication of a revival in the Greek spirit. And why should there be? The Greek Church is not composed of the old Greek people. It is grafted upon the barbarism which for unknown ages has vegetated along the shores of the Dnieper, the Don, the Black sea and the Caspian. What remains, then, in the Orient, to make head against the vigorous blows of the young, healthy and aspiring Protestantism? The Armenian

mind is the only intellectual developement there of any strength; and that is passing through a great reformation. It is becoming Americanized, and, as at Aaintol, will soon throw a new light and glory over the region of Tigris and the Euphrates.

It is easy to see, then, that the future is big with other issues than those between the Greek and Latin Cross. The Anglo-American has carried his spirit and his church to the walls of Babylon—he has revived the dust of ages—he is re-building the waste places; and shall *we*, from whose bosom he sprung, fail in sympathy and support? It is proved that the smallest seed shall sometimes produce the greatest plants; and who shall say when and where the American Reformation in Turkey shall terminate?—*Cincinnati Daily Columbian*.

PAUPERISM AND CRIME: STATISTICS.

The Auburn *American* has the following: "There are some startling facts in relation to the proportion of foreign born to native born in our almshouses and prisons. Within the last ten years, the number of paupers supported at the public charge in Massachusetts, was as follows:

Americans,	48,633
Foreign born,	90,989
Total,	139,622

Forty-two thousand, three hundred and fifty-six, more foreign than native paupers supported by Massachusetts alone, in a single decade of years! It costs her over FOUR MILLIONS OF DOLLARS to take care of the foreign born army of nearly 91,000 paupers!

In the Scuykill Co., (Pa.) Prison, there were in 1854, 293 commitments; of this number the proportion was as follows:

Americans,	76
Foreigners,	217!

Of the latter, 167 were Irish. The number of persons committed in 1854 was 68, Americans 18, *Foreigners*, 50! There are now in that prison 22 prisoners; Americans, 4; *Foreigners* 18! and this proportion holds good in nearly all our Asylums, Almshouses, Hospitals, Jails, Work-houses, Penitentiaries and State Prisons.

At a recent date there were 2,420 inmates of the Philadelphia Almshouses, and of this number full *two-thirds* were foreign born!—From the 15th of February last, to the 15th of March—one month—the Board of Visitors of the Blockly Alms-house, of Philadelphia, extended out-door relief to 3,719 persons, as follows:

Americans, (including colored,)	1,120
Foreigners,	2,599!

Of the latter, 1,930 were from Ireland. The cost, in one month, to the county of Philadelphia, *exclusive* of medicine, (a large item,) was \$4,224, 94, and more than two-thirds of it all is bestowed upon aliens!—*Exch.*

INTERIOR HEAT OF THE EARTH.

The following article from the *Scientific American* disputes the common theory of the interior heat of the globe. Should the doctrine of a central fire be refuted, Father Walworth will have to find a new location for hell.

"The last number of the *London Mining Journal*, dated June 23d, received by us this week, contains an able article on a subject lately discussed in our columns, viz: the central heat theory of the Earth. It is an answer to James Nasmyth, who had written a long and somewhat able article on the late eruption of Mount Vesuvius, in proof of the interior of the Earth being a mass of fiery molten matter. The author of the reply is William Radley, Chemical Engineer, who takes our view of the question, and presents some of the arguments which we have presented on the subject, adding some others to strengthen all those already advanced. The following are a few of these:

"Supposing, with Herschel, Bessel, and other geometers, that our orb was formed by the condensation of nebulous matter, it can be shown that a very high temperature never resulted from the aggregation of this vaporiform cosmical matter; and other equally valid considerations attest the high improbability of the interior of our Earth being occupied by igneously molten matter.

"The depth to which volcanoes penetrate has been approximately estimated, upon good data, and found not to exceed seven to eight miles; and whilst the erupted matters are derived solely from materials that do not exceed in density 2.5 times that of water, it must follow that, far, far below the volcanic sources, the density of the compounds must at least be 7.5 times that of water.

"That the earth is hotter the lower we descend, I deny beyond a certain moderate limit; and the annals of Cornwall attest, that rocks of the same depths differ in temperature, the one from the other, 15 degrees to 50 degrees Fahrenheit.

"An increase of density of the Earth would necessarily be attended by a diminution in the orbital period, but it is a fact that, in the lapse of 3,000 years, this yearly period has not increased or diminished a minute of a degree—in fact, not any appreciable quantity either way.

"Mr. Nasmyth has transcribed, without reflection, the absurd notion of the Plutonist school."

"These are stubborn facts to which the great majority of Professors of science in our colleges would do well to take heed. We especially recommend them to the attention of Prof. Guiot."

PROTRACTED ABSTINENCE.

There have been so many cases of wonderfully protracted abstinence recorded by medical writers, running from one month to six months, that it is difficult to know where to limit our belief. A very remarkable case in England has completely baffled the skeptical physicians and others who have attempted to discover indications of imposture. The following case published in Canada adds another to our list of wonders.

[From the Montreal Medical Chronicle.]

A SINGULAR CASE—LIVING WITHOUT FOOD.

Quebec, May 13, 1855.

SIR:—I have but one desire—one thought; to be useful to my fellow creatures. Please communicate the following to your colleague, and to the public if you think fit. If science can derive some benefit from my communication, my satisfaction will be great. I shall have fulfilled a sacred duty toward my brethern of every origin and color.

There is at present in St. Hyacinthe, in the District of Montreal, a physiological phenomenon, which I consider very interesting, and deserving of the attention of scientific men.

The facts, as far as I have been able to ascertain, are as follows:—There is in St. Hyacinthe a young girl about 17 or 18 years old, (I forget her name,) belonging to a very respectable family of that place, who has for about three months taken no food of any kind whatever. Her health has not suffered, her complexion is fair, she is always lively, and busy about the house or teaching the poor children of her own place reading, writing, sewing and praying; still she does not seem to enjoy a strong constitution. Last Christmas, after an absolute fast of three months, she has never been able to keep anything on her stomach. This young person, who is said to be of a very amiable and candid disposition by those who know her, does not appear to have any intention of deceiving, and after strict surveillance it has been ascertained that there is no deception on her part.

There must necessarily be something extraordinary in the physical organization of this person to produce such a phenomenon. We can understand that a lethargic sleep may last several days, or even weeks, that a person may exist for some time, under the influence of a fever without taking food, but in this case, where a young girl remains in her usual state, preserves her complexion, her sleep, her strength, her good humor, without any palpable change, without either eating or drinking, there is, it appears to me, something very extraordinary—something which certainly deserves the attention of science.

An investigation of facts, a study of the symptoms and a search for the causes, would perhaps lead to the solution of this physiological phe-

nomenon, and open to science the way to new discoveries, interesting as well as useful, on man's physical system.

Being convinced that the mere enunciation of the existence of a like phenomenon will suffice to attract the attention of scientific men, and that the desire to study its character and to induce them to occupy themselves with the work, by praying for the success of a discovery which will but serve as a vanguard for more brilliant ones, and cause the absurd idea, that there are in nature mysteries impenetrable to science, to disappear.

Believe me to be sincerely, Sir,

Your friend and servant,

P. BOUCHER DE BOUCHERVILLE.

A HALL, M. D., Montreal.

SWEDISH LAWS AGAINST INTOXICATION.

The laws against intoxication are enforced with great rigor in Sweden. Whoever is seen drunk is fined, for the first offence, \$3 ; for the second, \$7, for the third and fourth a still further sum; and is also deprived of the right of voting at elections, and of being appointed a representative. He is besides publicly exposed in the parish church on Sunday. The New York Sun says :

“ If the same individual is found committing the same offence a fifth time, he is shut up in the house of correction, and condemned to six months hard labor ; if he is again guilty, to a year's punishment of a similar description. If the offence has been committed in public, such as at a fair, an auction, &c., the fine is doubled ; and if the offender has made his appearance in church the punishment is still more severe. Whoever is convicted of having induced another to intoxicate himself, is fined three dollars, which sum is doubled if the person be a minor. An ecclesiastic who falls into this offense, loses his benefice ; if he is a layman who occupies any considerable post, his functions are suspended and perhaps dismissed. Drunkenness is never admitted as an excuse for crime ; and whoever dies when drunk, is buried ignominiously, and deprived of the prayers of the church. It is forbidden to give, and more explicitly to sell any spiritous liquors to students, workmen, servants, apprentices or private soldiers. Whoever is observed drunk in the streets, or to make a noise in a tavern, is sure to be taken to prison, and there detained until sober, without, however, being exempt from the fines. One-half of these fines go to the informers, (who are generally police officers) and the other half to the poor.

If the delinquent has no money, he is kept until some one pays for him, or until he has worked out his enlargement. Twice a year these ordinances are read aloud from the pulpit, by the clergy ; and every tavern-keeper is bound under the penalty of a heavy fine, to have a copy of them hung up in the principal rooms of his house.”

CURIOUS ELECTRICAL PHENOMENA.

The Eaton Democrat, (Mich.) of the 26th ult., has come to us marked around the letter of a correspondent, which describes a peculiar phenomenon which he witnessed during a snow storm on the eleventh of last month, at about half past eight o'clock in the evening, when at the house of his brother in Tuscola, Livingston Co. His brother while crossing the street beheld streams of light issuing from his fingers, and on attempting to brush them off they began to issue from his clothes and his hair. He then called upon the writer to come out and see it, who did so, and found himself also enveloped in light, when he approached him; he was literally covered with small flames resembling a multitude of minute candles. He says: "We stood in the middle of the street, the night as dark as Egypt, and we presenting the imposing appearance of lamp-posts illuminated by a hundred burning tapers."

One characteristic of the phenomenon was rather singular. Although we were nearly all in a blaze, or at least nearly covered with a multitude of small blazes, yet they did not reflect the least light, nor were they in the least affected by the wind. We called the family out to see the sight, and the lights immediately appeared on them, but in a far less degree of brilliancy than they did on us. The appearance was striking indeed, and with its soft, gentle phosphorescent flickering, contrasted beautifully with the thick darkness of the night, and the hoarse moaning of the elements into fury by the madness of the storm."

This is the second notice of a like phenomenon observed during the past winter. The other case is related by H. Ware, of Cambridge, Mass., in a letter to Professor Silliman, and published on page 273, last number of Silliman's Journal. The night on which it was witnessed was the 17th of December last, while he was walking along the long bridge between Boston and Cambridge. His attention was attracted to the iron lampposts on the bridge by a loud hissing noise, and by several sharp pricks on his forehead, and on raising his hand to remove his felt hat he beheld a brilliant discharge of electric sparks when his fingers touched its rim. He then looked to the lamp-posts, and saw long streams of electric light, streaming out from every point of them, although the lamps were not lighted. This was during a snow storm and the wind blowing very strong, as was the case at Eaton.—*News-paper.*

AVARICE ILLUSTRATED—DEATH OF A CONVICT IN THE INDIANA PENITENTIARY.—
"A man 73 years of age, died on Friday night last, of an affection of the heart, having performed on the day previous to his death, his allotted task in apparent good health. He leaves a property valued at \$100,000, and was incarcerated for the period of two years for the crime of *forgery*

to the amount of \$25 ! The old chap was miserly in the extreme, denying himself the smallest luxury, beyond the prison fare of bread and water, and beef's head broth.

Many anecdotes are related of this old scamp, which go to mark him as one of the oddities of his species. At the time of his arrest for the alleged forgery, he was tendered counsel, who pledged themselves to clear him for a fee of \$500. To this the old man replied, that "if convicted the sentence would only be for *two years*, and he didn't think he could make his expenses and two hundred and fifty dollars a year out of the penitentiary, and it would cost him nothing to live there, and he would save that much any how !"—*Newspaper*.

OFF-HAND CRITICISM.—The following notice from the London Leader of a stray copy of Buchanan's Anthropology which has reached that region, furnishes a good specimen of the flippant style in which editors enlighten (or *endarken*) the public as to the character of cotemporary literature, by a hasty glance at the title-page and a rough guess at the contents of the volume reviewed. A few American works are dispatched with brief notices, of which the following is one :

"A third American work has reached us—this time from Cincinnati. A "great country" naturally has great words, and so a mere British public must not be astonished at a series of lectures on what we call Phrenology being entitled *Outlines of Lectures on the Neurological System of Anthropology, as Discovered, Demonstrated, and Taught in 1841 and 1842*. By Joseph R. Buchanan, M. D. Rashly did we say "Phrenology" would express the subject, for it also includes Cerebral Physiology, Pathognomy, and Sarcognomy. However, the part, as usual, contains the whole. The volume gives us outlines of one hundred lectures, prefaced by an elaborate review of Gall's system, which it corrects on many points. There are also numerous engravings, displaying sectional views of the craniums of philanthropists or cannibals, as the case may be. Everything is explained in the customary manner by figures and an Index. The work, in spite of its technical jargon, is really interesting—indeed valuable—and will doubtless be eagerly sought by the increasing public which the subject now commands."

It might be remarked that a "great country" like Great Britain, and a great newspaper like the Leader ought to furnish intelligence enough to discriminate even in a running notice, between Phrenology the *science of the mind* and Cerebral Physiology, the science of *Physiological* functions connected with the brain—a science of which Gall and Spurzheim had no conceptions. The compliments of the Leader may be returned in kind, for that journal "in spite of its *flippancy and carelessness* is really interesting—indeed valuable" to the cause of human progress.

TO STUDENTS OF ANTHROPOLOGY.

The editor of the Journal proposes to give some time in the month of October, commencing probably about the 16th or 18th the month, a course of thorough

INSTRUCTION IN ANTHROPOLOGY.

to a select class, to be composed of *practical phrenologists, public lecturers, scientific teachers*, agents for Buchanan's Anthropology, medical students, and other earnest enquirers, male and female, who wish to become familiar with the new science.

The lectures will go on continuously, through the day and evening, until the course is completed, and will be accompanied by familiar personal instruction and experiments designed to impart a thorough acquaintance with this subject.

The above will probably be the only opportunity afforded this year for acquiring in so short a space of time a thorough knowledge of the new Anthropology, and in order to abridge as much as possible the time and labor of the course, it is recommended that all who design attending should previously make themselves thoroughly familiar with the contents of Buchanan's system of Anthropology.

It is evident that in the progress of the human race, a new profession of high intellectual character is demanded, a profession neither medical nor clerical in its character, but performing many of the functions of both, in assisting the moral and physiological improvement of man, a profession more comprehensive and elevated in its character than that of the mere practical phrenologist,—a profession which shall embrace the highest knowledge of Anthropology and its collateral sciences, to apply them to the benefit of individuals and communities, aiding them in the great work of moral, intellectual and physiological culture. In short, many of the most important offices of the medical, phrenological and clerical professions belong to the profession of the thorough ANTHROPOLOGIST, whose duty it will be hereafter to teach in the community the laws of health, growth and development, and the best methods of retrieving moral and physiological errors.

 **The most liberal terms given to Agents for the "Journal of Man."—Office No. 5, Post Office Building.**

SENTIMENTS OF THE CLASS.

At the close of a course of lectures on the Science of Anthropology just delivered in this city, by Dr. Jos. R. Buchanan, the class called a meeting and appointed Wm. B. Elliott, of Philadelphia, Chairman, and Olive S. Wait, of Illinois, Secretary.

Mr. Elliott spoke of the object of the meeting, and hoped that resolutions expressive of high regard and appreciation for the able manner in which Dr. Buchanan had presented the truths of Anthropology, would be adopted by the class.

The following resolutions were then read and unanimously adopted:—

Resolved—That in the Science of Anthropology as taught by Dr. Buchanan, we recognize the clearest and most comprehensive exposition of the laws which govern Man, that has ever been presented to the world.

Resolved—That in the fundamental principles of this Science, when properly understood, we believe will be found a key to unlock the mysteries and solve the great problems involved in the true Education and Elevation of Man.

Resolved—That in human impressibility, including the Science of Psychometry as discovered and systematized by Dr. Buchanan, taken in connection with the general functions and laws of the Brain, we recognize facts and principles of the utmost importance to the Parent, the Teacher, and the Reformer.

Resolved—Also, That in the mere perception of the novelty, beauty, and symmetry of the laws discovered by Dr. Buchanan, we recognize immense practical utility; such perception being pre-eminently calculated to elevate the mind in adoring gratitude toward the Creator of the Universe.

Cincinnati, October 31st, 1855.

WM. B. ELLIOTT, Chairman.

O. S. WAIT, Secretary.

Eclectic Medical Institute.

Chartered in 1845—Total Number of Matriculants, 2145; Session of 1854-5, Matriculants, 279, Graduates, 81.

The eleventh winter session of the *Eclectic Medical Institute* will commence on Monday, October 15th, 1855, and continue sixteen weeks, in the College edifice corner of Court and Plum streets, Cincinnati. Gratuitous preliminary lectures will be delivered from the first to the fifteenth of October, and the dissecting rooms will be open.

The Spring session begins in February, immediately after the close of the winter session, and embraces a full course on the same terms. Students wishing to be received as private pupils can make arrangements with members of the Faculty.

EXPENSES, &c.—The College fees are as follows: matriculation, \$5; tuition, \$20; graduation, \$25; Demonstrator's ticket for those who dissect, \$5. Boarding, \$2.50 to \$3.00 per week. All are required to engage in dissection at least one session before graduation. All students are expected to bring and present to the Dean satisfactory testimonials of the time they have devoted to medical study, and of their moral character. The requisites for graduation are a good moral character and three years of medical study, during which time at least two full courses of medical lectures must be attended, one of which must have been in the Institute.

TEXT BOOKS.—The text books recommended are as follows:—*Chemistry*—Fownes, Gardner, Turner. *Anatomy*—Wilson, Harrison, Horner. *Physiology*—Kirkes & Paget, Dunglison, Carpenter. *Materia Medica*—American Eclectic Dispensatory, United States Dispensatory, Pereira. *Botany*—Griffith's Medical Botany, Bickley's Botany. *Practice*—Newton & Powell's Eclectic Practice, Jones' American Eclectic Practice, Wood, Watson. *Pathology*—Williams. *Surgery*—Hill's Eclectic Surgery. *Obstetrics*—King, Meigs, Ramsbotham, Churchill.

Graduates of the Institute, or of other respectable schools, are admitted to attend the lectures by paying the matriculation fee. Gentlemen who have graduated in other colleges may obtain much additional knowledge by attending a course in the Institute. A liberal courtesy is inculcated and practiced by the Faculty.

For further information, address

J. R. BUCHANAN, M. D., *Dean of the Faculty.*

The members of the Faculty may be found at their offices as follows:—Prof. Sherwood, No. 243 Court street, near the Institute. Profs. Cleveland and Hoyt, and Prof. King, Seventh street, near Elm. Prof. Newton, Seventh st., between Vine and Race. Prof. Freeman, corner Sixth and John. Prof. Buchanan, No. 5, over the Post Office, where students will call on arriving in the city.